

What is claimed is:

- 5 1. Cold-rolled fixing screw consisting of a low-alloy carbon steel with a high degree of deformation according to the ratios of external diameter to core diameter of >1.2 and pitch to external diameter of >0.23 , with a self-tapping thread for screwing into materials, in particular plastics, **characterized** by a screw material of a screw of steel of ferritic structure and additional constituents
10 with a substantially higher carbon content than the carbon that is contained in the ferrite, said mixed structure having a maximum carbon content of 0.42 weight percent and a maximum grain size that corresponds to at least 2000 grains/mm², preferably at least 3000 grains/mm², with a residual stress that is impressed and maintained by the cold rolling process.
- 15 2. Fixing screw according to claim 1, characterized in that the additional constituents are, either singly or in combination, proportions of spherically formed cementite, lamellar perlite, bainite or martensite.
- 20 3. Fixing screw according to claim 1 or 2, characterized in that manganese is added in 0.60-2.0 weight percent to the screw material.
4. Fixing screw according to any one of claims 1 to 3, characterized in that silicon is added in max. 1.2 weight percent to the screw material.
- 25 5. Fixing screw according to any one of claims 1 to 4, characterized in that chromium is added in max. 2 weight percent to the screw material.
6. Fixing screw according to any one of claims 1 to 5, characterized in that
30 molybdenum is added in max. 1 weight percent to the screw material.
7. Fixing screw according to any one of claims 1 to 6, characterized in that vanadium is added in max. 0.5 weight percent to the screw material.

8. Fixing screw according to any one of claims 1 to 7, characterized in that boron is added in max. 0.008 weight percent to the screw material.
- 5 9. Fixing screw according to any one of claims 1 to 8, characterized in that niobium is added in max. 0.15 weight percent to the screw material.
10. Fixing screw according to any one of claims 1 to 9, characterized in that titanium is added in max. 0.3 weight percent to the screw material.